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LIST OF PUBLICATIONS ON WOOD FIBER RESEARCH

This list includes publications that present the results of research by the Forest Products Laboratory in this particular field of wood products research.

Single copies of the various items may be obtained free upon request from the Director, Forest Products Laboratory, Post Office Box 5130, Madison, WI 53705. Classroom quantities are not available because of limited printing and storage facilities.

Title	Author	Publication and date
Z-direction restraint, a new approach to papermaking.	Setterholm, Vance, Benson, Roy E., Wichmann, John F., & Auchter, Richard J.	USDA For. Serv. Res. Pap. FPL 256. 1975.
Influence of transition metals on oxygen pulping.	Landucci, L. L., & Sanyer, Necmi	Tappi 58(2):60-63. 1975.
Study indicates dry recovery of paper from shredded trash may be feasible.	Laundrie, James F.	Pap. Trade J. 159(2): 28-30. 1975.
Oxygen pulping of shortleaf pine with sodium carbonate.	Minor, James L., & Sanyer, Necmi	Tappi 58(3):116-119. 1975.
High-concentration alkali pulping of southern pine.	Connors, W. J., & Sanyer, Necmi	Tappi 58(2):80-82. 1975.
Effect of anaerobic storage upon quality of aspen pulpwood chips.	Eslyn, W. E., & Laundrie, J. F.	Tappi 58(6):109-110. 1975.

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Recovery and reuse of waste-paper from shredded household trash.	Forest Products Laboratory	USDA For. Serv. Res. Pap. FPL 252. 1975.
Storage of red alder chips with and without bark--treated and untreated.	Springer, E. L., Schmidt, F. L., Feist, W. C., Zoch, L. L. Jr., & Hajny, G. J.	USDA For. Serv. Res. Pap. FPL 261. 1975.
High-yield linerboard kraft pulp from roughwood chips.	Horn, R. A.	Tappi 58(9):142-145. 1975.
What are the effects of recycling on fiber and paper properties?	Horn, R. A.	Pap. Trade J. 159(7/8): 78-82. 1975.
Waste newspapers can be fiber source for corrugating medium.	Koning, J. W. Jr.	Pap. Trade J. 159(16): 63. 1975.
Repeated recycling of corrugated containers and its effect on strength properties.	Koning, J. W. Jr., & Godshall, W. D.	Tappi 58(9):146-150. 1975.
Secondary fiber research at the Forest Products Laboratory.	Klungness, J. H.	Tappi 58(10):128-131. 1975.
Method for measuring the interlaminar shear properties of paper.	Byrd, Von L., Setterholm, V. C., & Wichmann, J. F.	Tappi 58(10):132-135. 1975.
Influence of metal and iodide ions in oxygen pulping of loblolly pine.	Landucci, L. L., & Sanyer, Necmi	Tappi 57(10):97-100. Oct. 1974.
Performance of stratified sheets.	Stöckmann, V. E.	Tappi 57(10):108-110. Oct. 1974.
Factors influencing the properties of oxygen pulps from softwood chips.	Minor, J. L., & Sanyer, Necmi	Tappi 57(5):120-122. May 1974.
A new concept in paper thickness measurement, an extended abstract.	Setterholm, V. C.	Tappi 57(3):164. Mar. 1974.
Web shrinkage energy: An index of network fiber bonding.	Byrd, V. L.	Tappi 57(6):87-91. June 1974.

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Recycled fiber properties as affected by contaminants and removal processes.	Klungness, J. H.	USDA For. Serv. Res. Pap. FPL 223. 1974.
How much moisture is needed to develop strength in dry-formed handsheets?	Byrd, V. L.	Tappi 57(4):131-133. Apr. 1974.
Carbohydrate stabilization with iodide in oxygen bleaching of kraft pulps.	Minor, J. L., & Sanyer, Necmi	Tappi 57(2):109-112. Feb. 1974.
Effects of wood and pulp properties on medium-density dry-formed hardboard.	Nelson, N. D.	For. Prod. J. 23(9): 72-80. Sept. 1973.
A method for studying the stiffness and internal friction of individual fibers.	James, W. L.	Wood Sci. 6(1):30-38. July 1973.
Economics of kraft pulping of unbarked wood.	Auchter, R. A., & Horn, R. A.	Pap. Trade J.:38,39. June 25, 1973.
Small-angle X-ray scattering by paper: A new method for investigating inter-fiber bonding.	Caulfield, D. F.	Tappi 56(3):102-106. Mar. 1973.
The role of phenolic resin in imparting properties to dry-formed hardboards.	Fahey, D. J., & Pierce, D. S.	Tappi 56(3):53-56. Mar. 1973.
Kraft pulps and hardboards from short-rotation sycamores.	Laundrie, J. F., & Fahey, D. J.	Pap. Trade J.:26,27. Feb. 12, 1973.
Dry methods of separating plastic films from waste paper.	Laundrie, J. F., & Klungness, J. H.	Pap. Trade J.:34-36. Feb. 5, 1973.
Quantitative changes in structural components of conifer woods during decay by white- and brown-rot fungi.	Kirk, T. K., & Highley, T. L.	Phytopathology 63(11): 1338-1342. Nov. 1973.
How anerobic storage affects quality of Douglas-fir pulp-wood chips.	Eslyn, W. E., & Laundrie, J. F.	Tappi 56(7):129-131. July 1973.

Title	Author	Publication and date
Effect of storing green wood chips at elevated temperatures.	Feist, W. C., Hajny, G. J., & Springer, E. L.	Tappi 56(8):91-95. Aug. 1973.
A treatment that shows promise for preserving stored wood chips.	Springer, E. L., Zoch, L. L. Jr., Feist, W. C., & Hajny, G. J.	USDA For. Serv. Res. Pap. FPL 216. 1973.
Evaluation of chemicals for preserving wood chips using pile simulators.	Springer, E. L., Feist, W. C., Zoch, L. L. Jr., & Hajny, G. J.	Tappi 56(6):125-128. June 1973.
New and effective chemical treatment to preserve stored wood chips.	Springer, E. L., Feist, W. C., Zoch, L. L. Jr., & Hajny, G. J.	Tappi 56(6):157. June 1973.
Pulp and papermaking residues as feedstuffs for ruminants.	Millett, M. A., Baker, A. J., Satter, L. D., McGovern, J. N., & Dinius, D. A.	J. Animal Sci. 37(2): 599-607. Aug. 1973.
Pulping without barking increases fiber yield.	Auchter, R. J.	Forest Prod. Lab. Madison, Wis. 1972.
Trends and prospects for use in fiber products.	Auchter, R. J.	USDA For. Serv. Gen. Tech. Rep. NC-1, Aspen Symp. Proc: 40-44. 1972.
Developing a hypothesis: Native cellulose elementary fibrils are formed with metastable structure.	Stöckmann, V. E.	Biopolymers Vol. 11: 251-270. 1972.
High yields of kraft pulp from rapid-growth hybrid poplar trees.	Laundrie, J. F., & Berbee, J. G.	USDA For. Serv. Res. Pap. FPL 186. 1972.
Effect of relative humidity changes on compressive creep response of paper.	Byrd, V. L.	Tappi 55(11):1612- 1613. Nov. 1972.

Title	Author	Publication and date
Kraft pulping of pulpwood chips containing bark.	Horn, R. A., & Auchter, R. J.	Pap. Trade J.:55-59. Nov. 6, 1972.
Effects of relative humidity changes during creep on hand-sheet paper properties.	Byrd, V. L.	Tappi 55(2):247-252. Feb. 1972.
A practical method for re-cycling wax-treated corrugated.	Mohaupt, A. A., & Koning, J. W. Jr.	Boxboard Containers: 60-62. Jan. 1972.
Oxygen/alkali oxidation of cellulose and model alcohols and the inhibition by iodide.	Minor, J. L., & Sanyer, Necmi	J. Polymer Sci.: Part C, No. 36, 73-84. 1971.
Elementary cellulose fibrils possess an entropic deformation mechanism.	Stöckmann, V. E.	J. Polymer Sci.: Part C, No. 36, 363-381. 1971.
Household separation of waste-paper: FPL employee survey.	Myers, G. C.	USDA For. Serv. Res. Pap. FPL 142. 1971.
Effect of manufacturing variables on stability and strength of wet-formed hardboards.	Steinmetz, P. E., & Fahey, D. J.	USDA For. Serv. Res. Pap. FPL 159. 1971.
Semi-automated recording of wood cell dimensions.	Hiller, C. H., Lewis, D. W., & Wengert, E. M.	Tappi 54(2):255-256. 1971.
Effect of pulping on cellulose structure. Part I. A hypothesis of transformation of fibrils.	Stöckmann, V. E.	Tappi 54(12):2033-2037. Dec. 1971.
Effect of pulping on cellulose structure. Part II. Fibrils contract longitudinally.	Stöckmann, V. E.	Tappi 54(12):2038-2045. Dec. 1971.
Predicting flexural stiffness of corrugated fiberboard.	Koning, J. W. Jr., & Moody, R. C.	Tappi 54(11):1879-1881. Nov. 1971.
Resistance of resin-impregnated paper overlays to accelerated weathering.	Fahey, D. J., & Pierce, D. S.	For. Prod. J. 21(11): 30-38. Nov. 1971.

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The effects of humidity on paper.	Byrd, V. L.	Chem 26 Pap. Processing 7(11):30-35. Nov. 1971.
Testing paper for easy printing.	Levy, W.	Reproductions Review & Methods: 28-31. Oct. 1971.
Future wood needs for paper-making fibers should not be a problem.	Auchter, R. J.	Pap. Trade J. 155(34): 58-61. Aug. 1971.
What's in the wastepaper fiber collected from municipal trash.	Myers, G. C.	Pap. Trade J.:32-35. Aug. 30, 1971.
Many problems involved in increasing utilization of waste paper.	Carr, W. F.	Pap. Trade J.:48-52. May 1971.
Effects of relative humidity and temperature on tensile stress-stain properties of kraft linerboard.	Benson, R. E.	Tappi 54(5):699-703. May 1971.
NSSC mills can operate independently using mixed magnesium-ammonia bases.	Sanyer, Necmi & Keller, E. L.	Tappi 54(3):381-385. Mar. 1971.
Measuring linerboard thickness and flute height of corrugated fiberboard.	Koning, J. W. Jr.	Tappi 54(2):236-238. Feb. 1971.
Bark and its possible uses.	Harkin, J. M., & Rowe, J. W.	U.S. For. Serv. Res. Note FPL-091. 1971.
Corrugating furnishes and mediums; their microscopy, sheet properties, and runnability.	Simmonds, F.	Paperboard Packaging: 1970.
Directional permeability of softwoods.	Comstock, G. L.	Wood and Fiber 1(4): 283-289. Winter 1970.
Rapid determination of the number of fibers per gram of pulp.	Horn, R. A., & Coens, C. L.	Tappi 53(11):2120-2123. Nov. 1970.
Dry-formed, medium-density hardboards from urban forest materials.	Forest Products Laboratory	USDA For. Serv. Res. Pap. FPL 254. 1970.

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Determining interfiber bonding by electrical conductivity.	Smith, W. E.	Tappi 53(10):1944-1947. Oct. 1970.
Fiber orientation and degree of restraint during drying effect on tensile anisotropy of paper handsheets.	Setterholm, V., & Kuenzi, E. W.	Tappi 53(10):1915-1920. Oct. 1970.
Butt swells of water tupelo for pulp and paper.	Laundrie, J. F., & McKnight, J. S.	U.S. For. Serv. Res. Pap. FPL 119. 1969.
Uses for sawdust, shavings, and waste chips.	Harkin, J. M.	U.S. For. Serv. Res. Note FPL-0208. 1969.
Lignin and its uses.	Harkin, J. M.	U.S. For. Serv. Res. Note FPL-0206. 1969.
Increased wood fiber recycling: A must.	Carr, W. F., & Horn, R. A.	Forest Prod. Lab., Madison, Wis. 1969.
Alkaline stability of gluconic acid, cellobionic acid, and cellobiitol.	Minor, J. L., Kihle, L. E., & Sanyer, Necmi	Tappi 52(11):2178-2181. Nov. 1969.
How to reduce vessel element picking in printing papers containing oak.	Byrd, V. L., & Fahey, D. J.	Pap. Trade J. Nov. 24, 1969.
Water-induced recrystallization of cellulose.	Caulfield, D. F., & Steffes, R. O.	Tappi 52(7):1361-1366. July 1969.
Is caustic soda suitable for buffering NSSC digestions?	Keller, E. L.	So. Pulp & Pap. Manufacturer. May 1969.
Swelling of prehydrolysis-kraft pulp fibers in cadmium ethylenediamine.	Simmonds, F. A.	Tappi 52(5):933-938. May 1969.
Progress and prospects of polysulfide pulping.	Sanyer, Necmi	Tappi 51(8):48A-51A. Aug. 1968.
Application of chemicals to wet webs of paper and liner-board using the smoothing press.	Fahey, D. J.	Indian Pulp & Pap.: 87-92. July 1968.

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Sodium sulfite recovery by direct oxidation of smelt.	Rice, J. W., & Sanyer, N.	Tappi 51(7):321-327. July 1968.
Method for measuring edgewise shear properties of paper.	Setterholm, V. C., Benson, R., & Kuenzi, E. W.	Tappi 51(5):196-202. May 1968.
Production of phenols by cooking kraft lignin in alkaline solutions.	Clark, I. T., & Green, J.	Tappi 51(1):44-48. Jan. 1968.
Microscopical and other fiber characteristics of high-yield sodium bisulfite pulps from balsam fir.	Horn, R. A., & Simmonds, F. A.	Tappi 51(1):67A-73A. Jan. 1968.
Kraft pulping of digger and knobcone pine.	Laundrie, J. F.	U.S. For. Serv. Res. Note FPL-0181. 1967.
Magnesium bisulfite pulping and papermaking with southern pine.	Keller, E. L., & Fahey, D. J.	U.S. For. Serv. Res. Pap. FPL 78. 1967.
How refining of vessel elements affects off-set printing papers.	Byrd, V., Horn, R., & Fahey, D. J.	Pap. Trade J. 151(46): 55-60. Nov. 1967.
A review of methods for estimating harmful pitch in wood pulps.	Simmonds, F. A.	U.S. For. Serv. Res. Note FPL-0156. 1967.
Outside storage of pulpwood chips--a review and bibliography.	Hajny, G. J.	Tappi 49(10):97A-105A. Oct. 1966.
Suitability of Appalachian woods for sanitary tissue and toweling.	Forest Products Laboratory	U.S. For. Serv. Res. Pap. FPL 66. 1966.
How expander rolls widen and improve sheet properties.	Chilson, W. A.	Amer. Pap. Ind. Mar. 1966.
How surface applications of starch affect hardwood-softwood papers.	Chilson, W. A., &	Amer. Pap. Ind. Mar. 1966.

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Phenolic resin treatment improves fiberboard compressive strength.	Koning, J. W. Jr., & Fahey, D. J.	Package Eng. 10(10): 130-139. Oct. 1965.
The future for pulp and paper.	Chidester, G. H.	For. Prod. J. 14(5): 232-234. May 1964.
Chemical treatments for improving compressive strength of linerboard at high moisture conditions.	Fahey, D. J.	U.S. For. Serv. Res. Note FPL-084. 1964.
Two-stage nonchlorination bleaching of several hardwood neutral sulfite semichemical pulps.	Simmonds, F. A., & Hyttinen, A.	U.S. For. Serv. Res. Note FPL-043. 1964.
Uses for slabs, edgings, and trims.	Forest Products Laboratory	U.S. For. Serv. Res. Note FPL-038. 1964.
Methods used at the FPL for preparing cross sections of paper and paperboard.	Horn, R. A., & Ellickson, S. C.	U.S. For. Serv. Res. Note FPL-022. 1964.

